

Notice of Allowability	Application No.	Applicant(s)	
	10/786,145	HONJO ET AL.	
	Examiner	Art Unit	
	Jason L. Lazorcik	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to february 23, 2004 and April 28, 2005.
2. ☒ The allowed claim(s) is/are 1-7.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/909,437.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date <u>02/23/2004</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

The amendment to the specification submitted on April 28 2005 should be amended to read;

This application is a divisional of application serial no. 09/909,437, filed July 19, 2001, now U.S. Patent No. 6,725,689, which application(s) are incorporated herein by reference.

Allowable Subject Matter

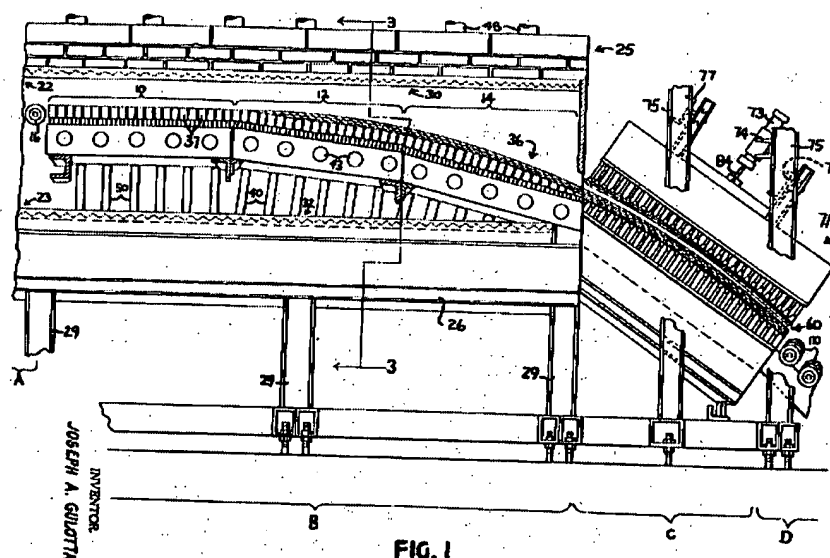
Claims 1 through 7 are allowed over prior art.

The following is an examiner's statement of reasons for allowance:

With respect to claim 1, Gulotta (US 3,409,422) teaches an apparatus for bend shaping (see Fig 1 excerpt below) a sheet comprising a heating furnace (25) having an inlet (not shown) and an outlet near lead line (36) and a travel path there through for heating and conveying a glass sheet. Gulotta teaches a plurality of in-furnace beds (10, 12, 14) having the claimed convex shape and designed to jet hot air against the glass

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sheet to support said sheet in a "floated state". The reference further teaches an out-furnace bed (71) proximately to the outlet of the heating furnace having a convex shape, and the out-furnace bed taken collectively with the in-furnace beds forming a linear arrangement of beds. Finally, the immediate reference teaches that the upper surface of the out-furnace is designed to jet cold air against the glass sheet while in the floated state.

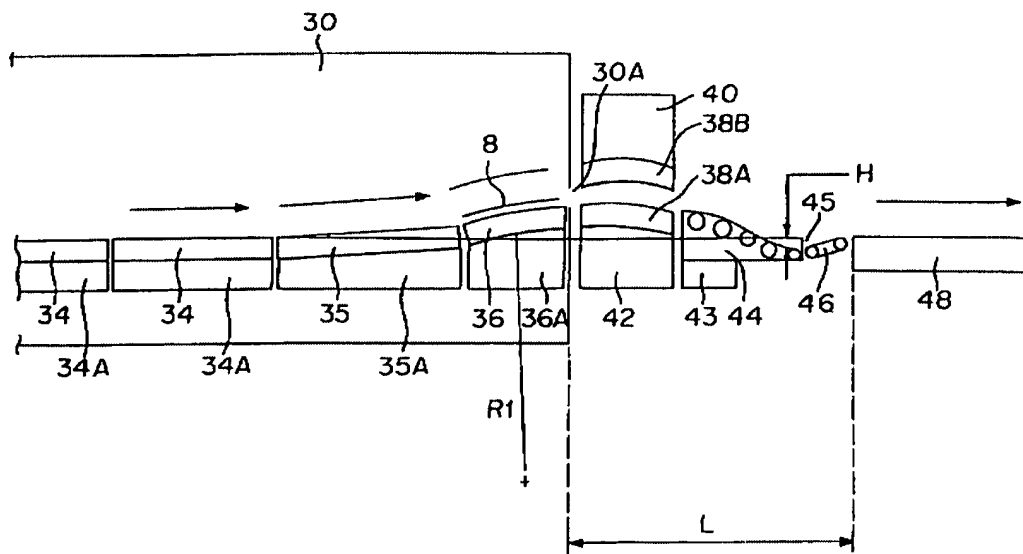


Gulotta teaches (Column 6, Lines 7-15) that the "head assembly (71) is supported for vertical movement by fluid motor (73)" and that the heights of the modules (37) are changed by reducing the depth of the module cavities and varying the lengths of stems (38) in the varying degrees to gradually change the surface defined by the upper termini of the modules" (Column 5, Lines 49-53).

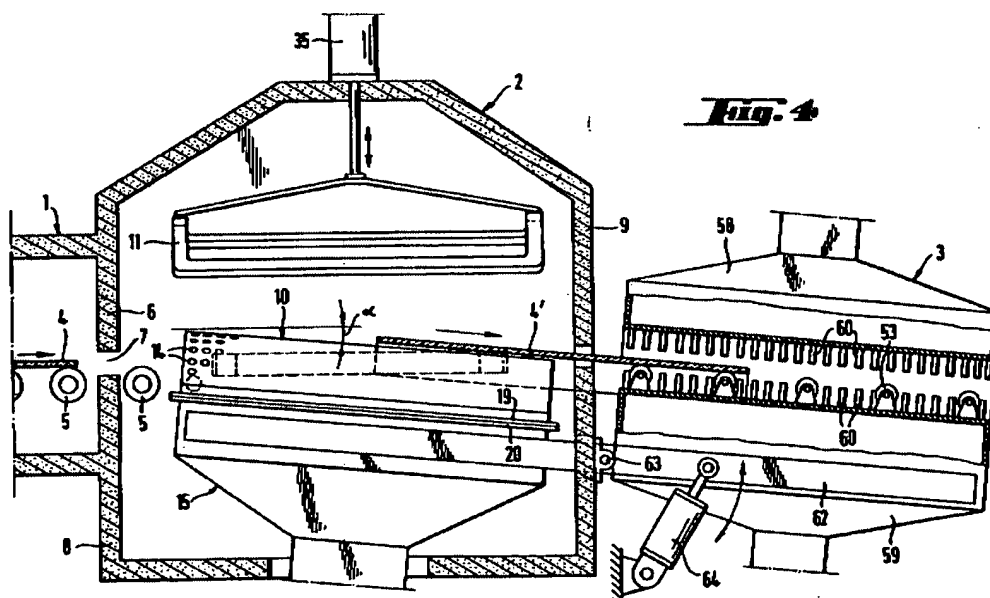
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The following references teach modifications generally relating to the Gulotta process and having varying means for controlling the slope of the in-furnace bed proximal to the furnace exit and/or the out-furnace bed.

Hirotsu (US 6,014,873) teaches (See Excerpt Figure 1 Below) that "in accord with the present invention, it is possible to arrange to a fair extent the level of the downstream end (of the apparatus)...by adjusting the gradient of the hearth beds 34, 35, 36 and the gradient of the cooling air blowing port module group 38A" (Column 10, lines 29-34). Hirotsu discloses no details on the structure within the apparatus which provides for the gradient adjustment within the hearth beds (34, 35, and 36) and the air blowing port module (38A). Further, one of ordinary skill in the art would not necessarily be appraised of the details of the structure.

FIGURE 1

Kuster (US 5,009,695) teaches a glass bending station (see figure 4 excerpt below) with a hydraulic or pneumatic cylinder (64), capable of pivoting the support frame 62 by an angle α . Through actuation of the cylinder, the bent glass plate is transferred along the induced slope into the cooling station (Column 4, Line 56- Column 5, line13). The immediate reference effectively provides an elevating mechanism or cylinder (64) which lowers both end of the in-furnace bed proximal to the furnace exit as well as lowering the end of the out furnace bed proximal to the furnace exit in order to provide a continuously declining slope from the furnace to the cooling section.



None of the above references taken alone or in combination with analogous prior art either anticipate or render obvious an apparatus for bend-shaping a glass sheet which specifically includes the disclosed elevating mechanism. Specifically, no prior art teaches a glass shaping apparatus including the use of an elevating mechanism positioned proximately to the outlet of the heating furnace and located below the

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upstream end of out-furnace bed. Further, no prior art teaches a single elevating apparatus in the described location which provides elevation control to BOTH the downstream end of the in-furnace bed proximal to the furnace outlet AND the upstream end of the out-furnace bed in a manner to cause a hill sloped feature to form in the direction of travel through the furnace.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason L. Lazorcik whose telephone number is (571) 272-8153. The examiner can normally be reached on Monday through Friday 8:30 am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JLL


ERIC HUG
PRIMARY EXAMINER